

STATEMENT OF SCOTT DONNELLY

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BEFORE THE:

SENATE COMMERCE COMMITTEE

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Thank you Mr. Chairman and Members of the Commerce Committee:

My name is Scott Donnelly and I am the Senior Vice President for Global Research for the General Electric Company. I am appearing today on behalf of GE to express my full support for the National Institute of Standards and Technology (NIST) Advanced Technology Program (ATP).

There is no better time to focus on strengthening technology leadership in the U.S. through collaboration among U.S. businesses, universities and government organizations. The NIST ATP is the best example of this type of collaboration in meeting our nation's competitive challenges and technology needs.

In the past several years, world-wide technology and innovation has exploded. This creates a large demand for the innovation process to have significantly more speed than just a few years ago. The NIST ATPs addresses this important factor, and excels at bringing technology to market very quickly.

We believe that when the government identifies areas of social and economic need that are strategic for the nation as a whole – but is highly risky for short-term commercial return – then joint government-industry collaboration makes sense. By sharing risks between government, universities and the private sector, U.S. Industry is able

to take more chances, which results in breakthrough technologies that wouldn't have been viable for any of the three to try it alone. Successful examples of NIST ATPs where GE has participated range from new technologies aimed at improved health care through medical diagnostics, to highly efficient energy sources, to next-generation lighting.

The NIST ATP is not the only government program to share risks between the public and private sectors, but we believe it is the best program of its kind because:

- It focuses on industry- and market-driven programs that are selected based on merit;
- It has successfully stimulated customer, manufacturer and supplier alliances aimed at accelerating time to market;
- It employs a rigorously open, competitive process with market and economic impact factored into the selection criteria;
- Demonstrated willingness to work with industry to structure mutually acceptable terms and conditions (i.e. minimize cost accounting burdens and establish realistic intellectual property terms);
- NIST has assigned competent Technical Program Managers to add value to the industry-led programs;
- To measure performance, NIST has established metrics of evaluation to assess the success of the programs, as well as the return on investment by all parties.

I would like to address the proposed rule changes for NIST ATPs proposed by the Department of Commerce, but first, let me begin with a brief overview of our company so you can have an understanding of how our research and technology fits into our company.

GE is a diversified technology, manufacturing and services company with a commitment to achieving technology leadership in each of its key businesses, including:

- Aircraft Engines
- Appliances
- Capital Services
- Industrial Services
- Lighting
- Medical Services
- NBC
- Plastics
- Power Systems
- Specialty Materials
- Transportation Systems

GE Global Research is the cornerstone of research and development for GE. From our beginning more than 100 years ago, we have been and continue to be one of the most diversified industrial laboratories in the world. We have more than 2,100 technologists representing the full spectrum of scientific disciplines with more than 750 PhDs.

Now I would like to share our thoughts on all of the proposed reforms for NIST ATPs:

Reform #1: University Leadership of ATP Joint Ventures

GE supports this proposal. We have partnered with numerous universities for NIST ATPs, and we understand with the benefits and capabilities that university research partners add to the programs. Not only do academic research partners bring new ideas into a company's research programs, they are also a source for our future workforce. All funding that is committed to universities is ultimately educating future scientists.

It is important that administration recognized that there is increased

value when universities and companies work together, rather than either working in a vacuum.

Reform #2: University and other Non-Profit Organization Ownership of ATP-Funded Patents

GE supports the rights to intellectual property (IP) for those who make inventions and discoveries. Universities and non-profits should have the ability to negotiate IP terms when collaborating with companies and other research partners.

Reform #3: Retain Large-Firm Participation in ATP Joint Ventures

GE supports this proposal as this is a common practice for GE. We have partnered in 83% of NIST ATPs in which we participate. We see this proposed reform as a positive contribution to the program that will allow large corporations like GE to offer commercialization and technology expertise to small- and medium-sized companies and universities that don't typically have this type of experience. We have found this approach successful, because some of our small company partners have been suppliers and other business affiliates that strengthens our relationships and creates a win-win situation for all involved.

Reform #4: Royalties on Government Investments in Profitable ATP Ventures

This proposed reform would modify ATP statute to require recipients of ATP awards to pay an annual royalty to the federal government of five percent of any gross revenues derived from a product or invention supported by or created as a result of ATP funding. It is intended that these royalties would be "reinvested" in the ATP.

We are concerned that this rule change introducing "recoupment" as a means to stabilize NIST ATP funding will render the program ineffective in stimulating the development of high-risk technology with real commercial potential.

One of the primary goals of the NIST ATP programs have experienced successes in bridging the gap between basic

technology research and market implementation. The recoupment clause may erode participation from companies, which would remove their valuable cost share funding, commercialization, technical expertise that complements and often enables smaller sized companies' participation in NIST ATP.

NIST ATP funding represents a very small portion of a research organization's total R&D spending. To use GE as an example, in 2002 we will receive about \$4.4 million in NIST funding, which was two-tenths of one percent of our company's total R&D budget. These funds are not going to further product development for GE. We use these funds to help our customers, suppliers and research partners with technology breakthroughs that they could not accomplish alone.

Secondly, the recoupment is based on 5 percent of gross revenue, which raises many serious issues. How would the Department of Commerce calculate the "government royalty" for an ATP. Often an ATP is focused on a specific, high-risk technical hurdle associated with a key component, process or subsystem. This component is then part of a larger system. The component may only be a small percentage of the total system cost. How could anyone agree on a fair and consistent formula to calculate the royalty fee owed to the government? This creates an administrative nightmare and adds additional expenses that would take away funding from the research programs.

In addition, to calculate the royalty on "gross revenues" would place undue pressures on industry to pay the government even if they are not making a profit. This would be difficult for GE, but it would be devastating for the smaller firms.

Reform #5: Ensuring that ATP Funding is Used Only to Support Removal of Scientific or Technological Barriers to Product Development

GE supports this proposal. In our company NIST ATPs are part of our Global Research labs, not the GE businesses. Research funded by NIST should be aimed at taking basic research and validating it, not product development or marketing.

In fact, this supports my previous point regarding recoupment. It would be practically impossible to correlate validation of scientific research with profits generated from specific products or services.

Reform #6: ATP Project Review and Evaluation Process

GE supports this proposal and fully supports the peer review process. Enhanced assessment of technologies supported in the private sector would add value to the process and lessen the chance of duplication of effort.

In conclusion, we would like to emphasize that NIST ATPs are highly valuable – not only because they meet national priorities and industry needs with the right sense of urgency – but they also allow GE to form strong R&D partnerships and mentoring relationships with smaller businesses that wouldn't typically have the resources to participate in such high-risk technology development. NIST ATPs have GE's full support, and we thank the Chairman and this committee for their commitment to ATP. We applaud the administration's efforts to address concerns and improve the program, and we appreciate the opportunity to provide input into the process.

I thank you, Mr. Chairman, for the opportunity to testify today and I welcome any questions.